

ElaadNL Presentation

- Overview study. Not choosing a winner or determining best combination of standards. Determine where we want to invest and test next.
- Advocate for open standards
- Need competition and new entrants
- EV-EVSE: in Europe, 61851 is mandated, 15118 is recommendation
- Roaming: setup #2 shown in the slide is happening in Europe now
- Q&A
 - Didn't attempt to define anything quantitatively
 - SEA standards not included? Reviewed SEP 2.0, had SAE folks review report. There are other protocols not included.
 - Cost of 15118 on EVSE side? Lonneke not sure because volumes low now. Adrian: networked vs non-networked could be cost driver.
 - George Bellino:

OEM Presentation

- Ford, Toyota, Honda, Nissan, BMW, Tesla, FCA
- Emphasis on defining specific use cases before mapping. (Dave)
 - D1: Define use cases
 - D2: Define grid value for each use case
 - D3: define communication pathways and determine which pathways/protocols provide the capability and functionality to meet use case requirements
 - D4: define implementation costs for all stakeholders for each use case
- Elements of use case criteria. Should identify outcome, and ecosystem in which outcome will take place (Adam)
 - Power flow (V1G or V2G)
 - Grid value beneficiary, grid value category, grid value activity
 - Location category (home, workplace, etc)
 - Degree of charging flexibility in business model
- Grid Value Beneficiary and Application (Jeremy)
 - Use cases that are most relevant to utility and customer
 - Don't want to force one protocol for all use cases. Protocols should help the use cases
 - In US, have ISO as a place for some VGI to happen. In US, not a lot of roaming occurring, so a global clearinghouse hasn't been established. Would be helpful within the working group to hear from charging system operators on how their systems are set up.
 - Should document when and why we did things differently than the Elaad report.
- Q&A
 - Niki supports
 - Jen – want a recommendation from working group on criteria to examine a protocol. If a standard isn't adopted, what criteria do we want to make sure things meet?

- Adam – once we have the use cases, then we can figure out what criteria do we need, which ones are more important that we want to enable first. Should define these before breaking into subgroups. Eladd starts off with communication pathways – think we should start off with what is it that we want to accomplish. How to bring to market has 2 parts: what communication needs to take place, and what market mechanism needs to be in place? Would come after the steps the OEMs outlined. Want agreement among parties on the use cases
- Dave – recommended deliverable 3 would include a discussion of criteria to evaluate protocols. There might not be a single best answer for a use case.
- Oxygen – use case methodology from 61851 and 15118
- Jeremy – not all use cases will need a protocol. example use case: vehicle uses telematics back to central server that could be conveyed to a driver through an app for renewables integration.

SCE and EPRI comments (Dean Taylor)

- Have more detailed edits
- VGI value groupings
 - Wholesale market services
 - Distribution infrastructure benefits
 - Customer/driver facing benefits
- VGI categories of tools
 - Charging level incentives
 - Managed charging
 - V1G wholesale market
 - V2G wholesale market
- Prioritize some groups of VGI benefits over others if they have high potential. Wholesale market services probably has lots of competition from other DERS, and low potential.
- Focus on grid and customers to narrow the scope
- George: Eladd focused on managing public infrastructure. Might not be relevant to our VGI objectives. Others thought public infrastructure is in scope
- Jen: balance between focusing on EV to EVSE that we have oversight over, and broader ecosystem to get it right
- Barry: need to consider larger scope, but is that what we want to do now? Not realistic to address entire scope in this timeframe, or add additional phases.
- Dean: tried to separate into what is basic and what is advanced
- OEM response to SCE/EPRI proposal
 - Adam – once we know what we want to accomplish, can say how it maps to what SCE is proposing to be in and out of scope. Ex a home use case doesn't have a lot of actors, so you might come to a different conclusion about what protocol you would need in a public charging environment
 - Sunil – layout value against use cases and prioritize.

- Steve Davis – this group shouldn't be prescribing smart grid protocol IOU sending to vehicle fleet. Keep it simple. Don't know where ACES vehicles are going. EVSE should be point of regulation.

General Workplan Feedback

- Sunil – need to consider smart meter cybersecurity issues
- Are American and European models compatible?
 - Ford: figure makes it look like everything has to go through the EVSE. Want to make sure telematics could be included.
 - BMW: report starts by looking at standards that exist. Doesn't say why the actors should communicate or what they're trying to accomplish. We should start there.
 - Eladd study is about open protocols, not proprietary protocols like telematics.
 - Porsche: most automakers are developing 15118
 - Mike: Put Elaad report into the American acronyms
 - Adam: the report is helpful background, but don't need to make our working group revolve around it
 - SCE: top down approach – define needs first before defining technology/market solution.
 - Mike Bourton – can lead use cases group
 - SCE – can lead glossary
 - George: communication from aggregator to EV is not in the list. George would volunteer to lead this if we create a subgroup for this.
 - Wednesday COB – want to have more info
 - Subgroups could have a spot on the agenda